Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1-19. (Cancelled)

20. (Previously Presented) A method of dielectrophoretically manipulating a polarizable object with elongated nanoelectrodes, comprising:

positioning a polarizable object in proximity with a first and a second elongated nanoelectrode, wherein said first elongated nanoelectrode is cylindrically shaped and comprises at least one nanotube; and

applying a time-varying electric field between the first and second nanoelectrodes, the field being sufficient to manipulate the polarizable object.

21. (Original) The method of claim 20, further comprising manipulating the polarizable object into a gap between the first and second nanoelectrodes.

22. (Original) The method of claim 21, further comprising trapping the object between the nanoelectrodes.

23. (Original) The method of claim 20, wherein the first nanoelectrode extends from a first end electrically coupled with a first time-varying voltage source to a second end and the second nanoelectrode extends

from a first end electrically coupled with a second voltage source to a second end in a direction at least partially towards the first nanoelectrode.

24. (Cancelled)

25. (Currently Amended) The method of claim 20~~24~~, wherein the cylindrically shaped nanoelectrode is a carbon nanotube.

26. (Original) The method of claim 23, wherein the first end of at least one of the nanoelectrodes is capacitively coupled with the respective voltage source.

27. (Original) The method of claim 22, further comprising coupling the object between the second ends of the first and second nanoelectrodes.

28. (Original) The method of claim 27, wherein the object is a nano-scale circuit device.

29. (Original) The method of claim 27, wherein the object is a strand of deoxyribonucleic acid (DNA).

30. (Original) The method of claim 27, wherein the object is a peptide nucleic acid (PNA).

31. (Original) The method of claim 27, wherein the nanoelectrodes are carbon nanotubes.

32-57 (Cancelled)

58. (Previously Presented) A method of dielectrophoretically manipulating a polarizable object with elongated nanoelectrodes, comprising:

positioning a polarizable object in proximity with a first and a second elongated nanoelectrode, wherein said first elongated nanoelectrode is cylindrically shaped and comprises at least one nanotube, wherein the first and second elongated nanoelectrodes are carbon nanotubes,

applying a time-varying electric field between the first and second nanoelectrodes, the field being sufficient to manipulate the polarizable object,

manipulating the polarizable object into a gap between the first and second nanoelectrodes,

trapping the object between the nanoelectrodes,

coupling the object between the second ends of the first and second nanoelectrodes, and

forming a plurality of carboxyl groups at each of the second ends of the carbon nanotubes.

59. (Previously Presented) The method of claim 58, further comprising chemically reacting a polarizable object with the carboxyl groups at each second end of the carbon nanotubes.

60. (Previously Presented) The method of claim 58, wherein the first nanoelectrode extends from a first end electrically coupled with a first time-varying voltage source to a second end and the second nanoelectrode extends from a first end electrically coupled with a second voltage source to a second end in a direction at least partially towards the first nanoelectrode.

61. (Previously Presented) The method of claim 60, wherein the first end of at least one of the nanoelectrodes is capacitively coupled with the respective voltage source.

62. (Previously Presented) The method of claim 58, wherein the object is a nano-scale circuit device.

63. (Previously Presented) The method of claim 58, wherein the object is a strand of deoxyribonucleic acid (DNA).

64. (Previously Presented) The method of claim 58, wherein the object is a peptide nucleic acid (PNA).

65. (Previously Presented) A method of dielectrophoretically manipulating a polarizable object with elongated nanoelectrodes, comprising:

positioning a polarizable object in proximity with a first and a second elongated nanoelectrode, wherein said first elongated nanoelectrode is

cylindrically shaped and comprises at least one nanotube, wherein the object is a peptide nucleic acid (PNA),

applying a time-varying electric field between the first and second nanoelectrodes, the field being sufficient to manipulate the polarizable object,

manipulating the polarizable object into a gap between the first and second nanoelectrodes,

trapping the object between the nanoelectrodes,

coupling the object between the second ends of the first and second nanoelectrodes, and

coupling a strand of deoxyribonucleic acid (DNA) into proximity with the PNA, wherein the DNA is complementary to the PNA to form a DNA-PNA duplex.